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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,815	03/18/2004	Su Chin Chang	M61.12-0606	7128
27366 7590 11/27/2007 WESTMAN CHAMPLIN (MICROSOFT CORPORATION) SUITE 1400 900 SECOND AVENUE SOUTH MINNEAPOLIS, MN 55402-3319			EXAMINER DARNO, PATRICK A	
			ART UNIT 2163	PAPER NUMBER
			MAIL DATE 11/27/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/804,815

Applicant(s)

CHANG ET AL.

Examiner

Patrick A. Darno

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-20 and 32-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,7-20 and 32-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                 | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. No new claims have been added. Claims 6 and 21-31 are cancelled. Claims 1 and 32 are amended. Claims 1-5, 7-20, and 32-51 are pending in this office action.
2. The Finality of the Office Action mailed 06/27/2007 has been withdrawn and the patentability of the claims has been reconsidered.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-7, 11, 15, 17, 19, 32-37, 39-40, 41-44, 48, and 51 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Number 5,734,889 issued to Tomoharu Yamaguchi (hereinafter “Yamaguchi”).

**Claim 1:**

Yamaguchi discloses a method of processing data stored in a structured data source, comprising:

receiving a natural language input (Yamaguchi: see at least column 2, lines 60-67 and column 4, lines 26-39);

analyzing the natural language input to identify semantic information contained therein (Yamaguchi: see at least column 2, lines 60-67 and column 4, lines 26-39 and column 5, lines 20-27);

associating portions of the natural language input with a command object and an entity object of a schema based on the semantic information and the natural language input, wherein

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the entity object relates to data in the data source (*Yamaguchi: see at least column 2, lines 60-67 and column 4, lines 26-39 and column 5, lines 20-27 and abstract*); and

rendering data from the data source in a table of columns and rows based on the schema and the associated portions of the natural language input (*Yamaguchi: see at least abstract*).

**Claim 2:**

Yamaguchi discloses all the elements of claim 1, as noted above, and Yamaguchi further discloses a method comprising accessing the data source to identify words and phrases associated with dimensions in the data source (*Yamaguchi: see at least column 2, lines 60-67 and column 4, lines 26-39 and column 5, lines 20-27*).

**Claim 3:**

Yamaguchi discloses all the elements of claim 2, as noted above, and Yamaguchi further discloses wherein accessing further comprises identifying words and phrases associated with levels and values in the data source (*Yamaguchi: see at least column 2, lines 60-67 and column 4, lines 26-39 and column 5, lines 20-27*).

**Claim 4:**

Yamaguchi discloses all the elements of claim 1, as noted above, and Yamaguchi further discloses wherein associating further comprises associating portions of the natural language input with a frame object of the schema, wherein the frame object corresponds to how to render data (*Yamaguchi: see at least column 2, lines 60-67 and column 4, lines 26-39 and column 5, lines 20-27 and abstract*).

**Claim 5:**

Yamaguchi discloses all the elements of claim 1, as noted above, and Yamaguchi further discloses wherein the command object relates to a task to be performed for rendering data

*(Yamaguchi: see at least column 2, lines 60-67 and column 4, lines 26-39 and column 5, lines 20-27 and abstract).*

**Claim 7:**

Yamaguchi discloses all the elements of claim 1, as noted above, and Yamaguchi further discloses:

changing the table based on a further command received *(Yamaguchi: see at least column 2, lines 60-67 and column 4, lines 26-39 and column 5, lines 20-27 and abstract).*

**Claim 11:**

Yamaguchi discloses all the elements of claim 7, as noted above, and Yamaguchi further discloses wherein the further command is adding information to the table *(Yamaguchi: see at least column 2, lines 60-67 and column 4, lines 26-39 and column 5, lines 20-27 and abstract).*

**Claim 15:**

Yamaguchi discloses all the elements of claim 1, as noted above, and Yamaguchi further discloses:

providing an interactive interface to a user for entering the natural language input *(Yamaguchi: see at least column 2, lines 60-67 and column 4, lines 26-39 and column 5, lines 20-27 and abstract).*

**Claim 17:**

Yamaguchi discloses all the elements of claim 1, as noted above, and Yamaguchi further discloses:

rendering a natural language description of information in the table (*Yamaguchi: see at least column 2, lines 60-67 and column 4, lines 26-39 and column 5, lines 20-27 and abstract; At least the data in the generated table (spreadsheet) is natural language.*).

**Claim 19:**

Yamaguchi discloses all the elements of claim 1, as noted above, and Yamaguchi further discloses:

associating portions of the natural language input with words and phrases associated with the data source (*Yamaguchi: see at least column 2, lines 60-67 and column 4, lines 26-39 and column 5, lines 20-27 and abstract*).

**Claims 32-37, 39-40, & 41-44:**

Claims 32-37, 39-40, and 41-44 are rejected under the same reasons set forth in the rejection of claim 1.

**Claim 48:**

Claim 48 is rejected under the same reasons set forth in the rejection claim 11.

**Claim 51:**

Claim 51 is rejected under the same reasons set forth in the rejection of claim 19.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8-10, 12, 18, 45-47, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi and further in view of U.S. Patent Application Publication Number 2005/0216421 issued to B. Reilly Barry et al. (hereinafter "Barry").

**Claim 8:**

Yamaguchi discloses all the elements of claim 7, as noted above, but Yamaguchi does not explicitly disclose wherein the further command is highlighting a portion of the table.

However, Barry discloses wherein the further command is highlighting a portion of the table (*Barry: see at least paragraph [0362] and paragraph [0364] and fig. 25(h)*).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Yamaguchi with the teachings of Barry noted above. The skilled artisan would have been motivated to improve the teachings of Yamaguchi per the above such that one could select table columns, thereby providing the user with the means to reorder table columns by dragging and dropping each column to its desired location (*Barry: paragraph [0264]*). Such flexibility in table design lets the user format the table to his/her liking.

**Claim 9:**

Yamaguchi discloses all the elements of claim 7, as noted above, but Yamaguchi does not explicitly disclose wherein the further command is sorting a portion of the table.

However, Barry discloses wherein the further command is sorting a portion of the table (*Barry: see at least paragraph [0228] and paragraph [0275] and paragraph [0564]*).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings Yamaguchi with the teachings of Barry noted above. The skilled artisan would have been motivated to improve the teachings of Yamaguchi per the above

such that the user is provided with a means for analyzing and displaying data stored that is stored in a server (*Barry: see at least paragraph [0228]*).

**Claim 10:**

Yamaguchi discloses all the elements of claim 7, as noted above, but Yamaguchi does not explicitly disclose wherein the further command is filtering information in the table.

However, Barry discloses wherein the further command is filtering information in the table (*Barry: paragraph [0275]*).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings Yamaguchi with the teachings of Barry noted above. The skilled artisan would have been motivated to improve the teachings of Yamaguchi per the above such that the user is provided with a means for analyzing and displaying data stored that is stored in a server (*Barry: see at least paragraph [0228]*).

**Claim 12:**

Yamaguchi discloses all the elements of claim 7, as noted above, but Yamaguchi does not explicitly disclose wherein the further command is clearing information in the table.

However, Barry discloses wherein the further command is clearing information in the table (*Barry: see at least paragraph [0211] and paragraph [0222] and paragraph [0362]*).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Yamaguchi with the teachings of Barry noted above. The skilled artisan would have been motivated to improve the teachings of Yamaguchi per the above such that information that is no longer needed, can be removed from the database management system.



**Claim 18:**

Yamaguchi discloses all the elements of claim 1, as noted above, but Yamaguchi does not explicitly disclose:

maintaining a history of previous tables rendered for future use.

However, Barry discloses maintaining a history of previous tables rendered for future use

*(Barry: see at least paragraph [0251]; Note that generated reports (tables) can be saved).*

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Yamaguchi with the teachings of Barry noted above. The skilled artisan would have been motivated to improve the teachings of Yamaguchi noted above such that a report that has already been generated does not need to be regenerated in the future. This is advantageous because it avoids performing redundant work.

**Claim 45:**

Claim 45 is rejected under the same reasons set forth in the rejection of claim 8.

**Claim 46:**

Claim 46 is rejected under the same reasons set forth in the rejection of claim 9.

**Claim 47:**

Claim 47 is rejected under the same reasons set forth in the rejection of claim 10.

**Claim 49:**

Claim 49 is rejected under the same reasons set forth in the rejection of claim 12.

5. Claims 13 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi and further in view of U.S. Patent Number 6,581,068 issued to Pierre Bensoussan et al. (hereinafter "Bensoussan").

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**Claim 13:**

Yamaguchi discloses all the elements of claim 7, as noted above, but Yamaguchi does not explicitly disclose wherein the further command includes switching the row and column information.

However, Bensoussan discloses wherein the further command includes switching the row and column information (*Bensoussan: column 10, line 63 - column 11, line 4 and column 16, lines 46-48 and column 17, lines 39-45*).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Yamaguchi with the teachings of Bensoussan noted above. The skilled artisan would have been motivated to improve the teachings of Yamaguchi per the above in order to grant the user flexibility to decide how to present stored data.

**Claim 50:**

Claim 50 is rejected under the same reasons set forth in the rejection of claim 13.

6. Claims 14, 16, 20, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi and further in view of U.S. Patent Number 5,960,384 issued to Douglas E. Brash (hereinafter "Brash").

**Claim 14:**

Yamaguchi discloses all the elements of claim 1, as noted above, but Yamaguchi does not explicitly disclose:

presenting candidate interpretations based on the natural language input.

However, Brash discloses:

presenting candidate interpretations based on the natural language input (*Brash: column 26, line 6 - column 27, line 4*).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Yamaguchi with the teachings of Brash noted above. The skilled artisan would have been motivated to improve the teachings of Yamaguchi per the above because the method disclosed by Brash achieves greater efficiency by using a smaller rule set, thereby minimizing rule-choice decisions (*Brash: column 8, lines 7-11*).

**Claim 16:**

Claim 16 is rejected under the same reasons set forth in the rejection of claim 14.

**Claim 20:**

Claim 20 is rejected under the same reasons set forth in the rejection of claim 14.

**Claim 38:**

Claim 38 is rejected under the same reasons set forth in the rejection of claim 14.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick A. Darno whose telephone number is (571) 272-0788.

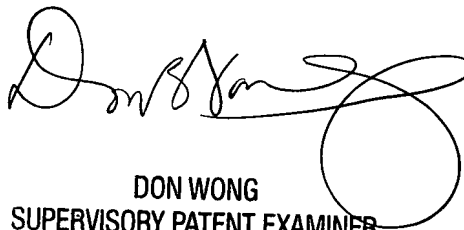
The examiner can normally be reached on Monday - Friday, 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Patrick A. Darno  
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